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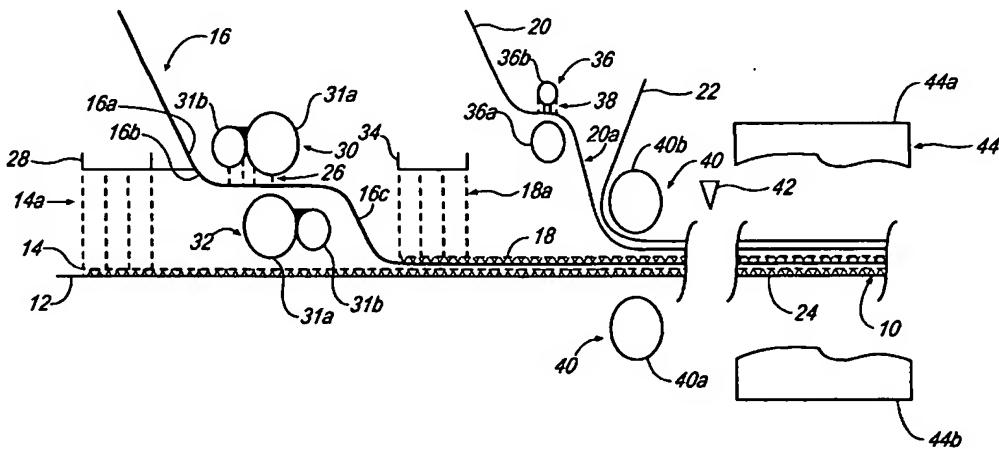
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: LAMINATED HEADLINER ASSEMBLY AND METHOD FOR FORMING A LIGHTWEIGHT LAMINATED HEADLINER



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(57) Abstract: A headliner assembly (10) includes a layer of core material (16), a binding agent (26) adjacent to the core material (16), a first layer of chopped fiberglass (14) adjacent to the binding agent (26), a scrim (20) adjacent to the first layer of chopped fiberglass (14), a catalyst (38) adjacent to the scrim (20), a cover stock (22) adjacent to the catalyst (38). The catalyst (38) and the binding agent (26) are mixed together and impregnate the core material when pressure is applied to the headliner assembly (10), thereby resulting in a rigid headliner assembly. A method of forming the headliner assembly (10) is also disclosed.

INTERNATIONAL SEARCH REPORT

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PCT/US 03/38042A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B60R13/02 B32B17/04 B32B27/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B60R B32B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category ^a	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 582 906 A (ROMESBERG FLOYD E ET AL) 10 December 1996 (1996-12-10) Laminate comprising layers scrim/adhesive/fibreglass/foam/fibreglass/ film or adhesive/decor. Foam layer impregnated with resin having catalyst premixed therein. column 3, line 65 - column 4, line 62 column 5, line 54 - column 6, line 4 column 6, line 25 - line 31 ----- -/-	1-9

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 997 265 A (JOHNSON CONTROLS HEADLINER GMB) 3 May 2000 (2000-05-03) PU foam impregnated with diisocyanate, then catalyst applied, then skin layers applied. Heated in mould to form polyurea and cure product. column 8, line 32 - column 9, line 27 claims 1,3 figure 3 -----	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date		Patent family member(s)	Publication date
US 5582906	A 10-12-1996	US CA	5486256 A 2149180 A1	23-01-1996 18-11-1995
EP 0997265	A 03-05-2000	DE EP	19847795 C1 0997265 A1	04-05-2000 03-05-2000